

# Acterna OFI-2000 Family Bi-Directional Optical Loss Test Set



## Setting a new standard for Optical Handhelds

The OFI-2000 is designed for the professional installation, verification, maintenance and repair of large optical networks.

## All in One

- Link Loss measurement
- Link Length/Delay time measurement
- System Power measurement
- SMS (short message system)
- Optical Return Loss(optional)
- Visible Fault Location (optional)
- 45 dB dynamic full duplex talkset (optional)

## Built-in Fiber Optic Xpert (FOX) Functionality

The OFI-2000 can measure, store and transmit Link Loss, Link ORL and Link Length.

With just one press of the FOX button calculate the average loss and the ORL automatically against user-definable thresholds and at both wavelengths (1310 and 1550 nm).

## Compatible with other Acterna products

The OFI-2000 offers all the measurement facilities of the high performance handheld family including TWINtest, and auto- $\lambda$  (wavelength).

## Cable result management and reporting

The OFI-2000 manages the test results and provides 3 levels of reporting:

- 1 Job Summary
- 2 Cable Summary
- 3 Fiber details

## Optical interface/connector flexibility

Several optical interfaces, connectors and adapters are available. Universal or fixed connectors, APC or PC-interface can be chosen for the loss test port, the power meter and the talkset, Exchangeable adapters are provided for the most common 2.5mm connectors. The UPP (universal push pull) interface for the VFL and the power meter covers all 2.5mm connectors - FC, SC, DIN, E-2000, etc.

### OFI-2000 offers:-

- Bi-directional loss measured in under 15 sec.
- Fiber Optic Xpert (FOX) functionality
- Telecom / CATV applications
- Length/Delay measurement
- Loss test set with 60 dB dynamic range
- Stand alone high accuracy power meter
- 1310/1550nm Laser Source
- Optical Return Loss Tester
- Full duplex talkset with 45 dB dynamic range
- Short message functionality
- VFL capacity
- Up to 13 hrs. Operation from rechargeable battery
- Cable result management for up to 40 cables with more than 1000 results



| Technical Specifications                                     | OFI-2001                                                                                                                                     | OFI-2002    |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Application                                                  | Telecom / Local-Loop                                                                                                                         | CATV / DWDM |
| Loss Test port                                               |                                                                                                                                              |             |
| Dynamic Range of Loss                                        | 60 dB                                                                                                                                        |             |
| Accuracy                                                     | loop back +/- 0.25 dB / Side by side +/- 0.15 dB                                                                                             |             |
| Optical Interface                                            | Physical Contact (PC) or angled physical contact (APC) with fixed connectors or universal adapter BN 2060 (details see ordering information) |             |
| Result Resolution                                            | 0.01 dB                                                                                                                                      |             |
| Test port sources                                            |                                                                                                                                              |             |
| Laser Types                                                  | Laser Class 1                                                                                                                                |             |
| Wavelength range                                             | 1310 +/- 30 nm<br>1550 +/- 30 nm                                                                                                             |             |
| Spectral bandwidth                                           | 5 nm maximum                                                                                                                                 |             |
| Output Level:<br>into 9/125 μm fiber (CW mode)               | − 3.5 dBm / − 3.5 dBm                                                                                                                        |             |
| modulated output average level                               | 3 dB reduced                                                                                                                                 |             |
| Level stability:                                             |                                                                                                                                              |             |
| Short term 15 min. (ΔT=+/- 0.3 K)                            | +/- 0.02 dB                                                                                                                                  |             |
| Long term 8 hours (ΔT=+/- 3 K)                               | +/- 0.2 dB                                                                                                                                   |             |
| Modulation frequencies                                       | 270 Hz, 330 Hz, 1 kHz, 2 kHz                                                                                                                 |             |
| Modes: CW                                                    | Continuous wave light                                                                                                                        |             |
| Auto-λ                                                       | Output signal includes λ information for Acterna Level Meters                                                                                |             |
| MOD                                                          | Modulation for fiber identification: 270 Hz, 330 Hz, 1 kHz, 2 kHz                                                                            |             |
| TWINtest                                                     | Both wavelength activated one after the other                                                                                                |             |
| Test port power meter<br>(internal pigtailed photo detector) |                                                                                                                                              |             |
| Wavelength range                                             | 1200-1650 nm                                                                                                                                 |             |
| Auto-λ detection (incl. TWINtest)                            | 1310/1550 nm with Acterna Laser Sources                                                                                                      |             |
| Dynamic Range of Power Meter                                 | 0 to − 80 dBm                                                                                                                                |             |
| Detector type                                                | InGaAs                                                                                                                                       |             |
| Display resolution                                           | 0.01 dB                                                                                                                                      |             |
| Fiber type                                                   | 9 μm                                                                                                                                         |             |



| Technical Specifications                      | OFI-2001                                                                                      | OFI-2002                    |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------|
| Application                                   | Telecom / Local-Loop                                                                          | CATV / DWDM                 |
| Stand alone high accuracy power meter         |                                                                                               |                             |
| Wavelength range, adjustable per              | 800 –1650 nm                                                                                  |                             |
| Selectable wavelength                         | 850/1300/1310/1480/1510/1550/1625 nm and one user-definable                                   |                             |
| Auto-λ detection (incl. TWINtest)             | 850/1310/1550 nm with Acterna Laser Sources                                                   |                             |
| Modulation Detection                          | 270 Hz, 330 Hz, 1 kHz, 2 kHz                                                                  |                             |
| Dynamic range                                 | +10 to – 70 dBm                                                                               | +26 to – 55 dBm             |
| Accuracy                                      | ± 0.2 dB (+ 7 to – 60 dBm)                                                                    | ± 0.25 dB (+23 to – 50 dBm) |
| Detector type                                 | InGaAs, 2mm                                                                                   | Filtered InGaAs, 2mm        |
| Display resolution                            | 0.01 dB                                                                                       | 0.01 dB                     |
| Fiber type                                    | 9 μm up to 100 μm                                                                             | 9 μm up to 50 μm            |
| Optical Interface                             | Universal adapter BN 2040 (details see ordering information)                                  |                             |
| Visible Fault Locator (optional)              |                                                                                               |                             |
| Wavelength                                    | 635 nm                                                                                        |                             |
| Output Power into 9/125 μm fibre              | 1 mW max.                                                                                     |                             |
| Optical interface                             | UPP for all common 2.5mm connectors                                                           |                             |
| Output modes                                  | Off, On, 1 Hz                                                                                 |                             |
| Length Measurement Accuracy:                  |                                                                                               |                             |
| Accuracy                                      | L < 3km : ± 50m    3km < L < 200km : ± 1.5%                                                   |                             |
| General (basic configuration)                 |                                                                                               |                             |
| Display                                       | 1/4 VGA active b/w display (5.7 inches), color display<br>optional (see ordering information) |                             |
| Power Supply (removable)                      | 3-way: dry batteries, NiMH rechargeable battery, AC/DC                                        |                             |
| Operating Time with dry batteries             | > 8 h                                                                                         |                             |
| Operating Time with NiMH accu                 | > 13 h                                                                                        |                             |
| LOW BATT display                              | ✓                                                                                             |                             |
| Auto off after 1 or 10 min.<br>or disabled    | ✓                                                                                             |                             |
| Battery charge indication                     | ✓                                                                                             |                             |
| Operation with ac adapter                     | ✓                                                                                             |                             |
| CE conform                                    | ✓                                                                                             |                             |
| Operation temperature range                   | – 10 to +50°C                                                                                 |                             |
| Storage temperature range                     | – 20 to +70°C                                                                                 |                             |
| Weight without batteries incl.<br>all options | 1.8 kg                                                                                        |                             |
| Dimensions (w x h x d) in cm                  | approx. 21 x 20 x 8                                                                           |                             |
| Data transfer direct via RS232                | ✓                                                                                             |                             |
| Store function                                | ✓                                                                                             |                             |

All parameters and values are subject to change without notice

# Optical Fiber Installation Tester

## Product information

To ensure optimal use (bi-directional measurement and communication).  
Two OFI units are required.

### General information

The OFI 200X unit is delivered as standard with a B&W LCD screen, RS232 interface and cable, neck strap, AC/DC adapter, soft case, one battery pack with 6 dry batteries, user manual, lens tissue (1x30 pcs) and connector cleaning sticks (5 pcs). The basic functions are bi-directional 1310/1550nm loss test, stand alone power meter and delay/length measurements.

### Base unit types

|          |                                                                                   |
|----------|-----------------------------------------------------------------------------------|
| OFI 2001 | 1310/1550nm OFI Tester: Telecom<br>(stand alone power meter with +10 to – 70 dBm) |
| OFI 2002 | 1310/1550nm OFI Tester: CATV<br>(stand alone power meter with +23 to – 60 dBm)    |

### Base unit options

|             |                                     |
|-------------|-------------------------------------|
| OFI/Col     | Color Display Option                |
| OFI/VFL/UPP | VFL option with UPP fixed connector |

### Accessories for OFI family

|           |                                                     |
|-----------|-----------------------------------------------------|
| OFI/RB    | Rechargeable Battery (can be charged with OFI/ACDC) |
| OFI/AC/DC | AC/DC Adapter                                       |
| OFI/CASE  | Additional OFI Soft Case                            |
| OFI/CL    | Cigarette Lighter Power Adapter                     |
| OFI/CCS   | Connector Cleaning Sticks (5 pcs)                   |
| OFI/OCT   | Optical Connector Cleaning Tape                     |
| OFI/SCT   | Spare Cleaning Tape for OFI/OCT                     |

### Optical Connectors for the loss test set

One connector must be specified when ordering an OFI unit

Standard fixed connectors: FC/PC, SC, ST, DIN, E2000, EC, FC/APC, SC/APC, DIN/HRL, E2000/HRL

Universal connectors: UNI/PC/NAD PC connector or UNI/APC/NAD APC connector with use of adapters  
UNI/FC/AD, UNI/SC/AD, UNI/ST/AD or UNI/DIN/AD (2060/00.XX type).

### Optical Adapter for Stand alone Optical Power Meter

One Optical Adapter provided as standard: the same type as the loss test set connector

Other adapters are also available:

A/ (SMA, FC/PC, Diamond, Biconic, DIN, VFO, ST, SC, EC, E2000, UPP2.5mm and UPP 1.25mm (2014/00.XX type)).

For more information on test adapters, cables and fiber optic couplers, see the separate datasheet: Fiber Optics Test Adapters and Cables



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